Claims

1. Synchronizer for more than one optical RZ signal in a wavelength multiplex transmission system comprising

   - at least one variable delay line (1) with an input receiving RZ-WDM optical channels (2)
   - at least one delay controller (3) receiving the RZ-WDM output optical channels (10)
   - the delay controller generating a control signal depending on the HF power of the RZ-WDM output optical channels (10) and
   - a control circuit (9) to control the at least one delay line (1) in such a way that the optical WDM channels are synchronized.

2. Synchronizer according to claim 1, comprising a variable wavelength dependant delay line (1) for a subset of two RZ-WDM optical channels (1) the channels are separated by fiber grating reflectors (11).

3. Synchronizer according to claim 1, comprising a variable wavelength dependant delay line (1) for a subset of two RZ-WDM optical channels (1) the channels are separated by fiber grating reflectors (11) and optical filters.

4. Method for synchronization of RZ-WDM optical signals realized by the steps:

   - Separating two channels from the WDM multiplex
   - Synchronizing them by

- Analyzing the HF power of the two channels
- Generating a control signal for the variable delay line
- Controlling the delay line
- And feeding the resulting synchronized signals back to the next subset of channels so that the synchronized channels are one of the two channels of the subset.

5. Method for synchronization of RZ-WDM optical signals realized by the steps:

- Separating two channels from the WDM multiplex with optical filters
- Synchronizing them by
- Analyzing the HF power of the two channels
- Generating a control signal for the variable delay line
- Controlling the delay line
- And feeding the resulting synchronized signals back to the next subset of channels.

6. Method for synchronization of RZ-WDM optical signals according to claim 4 in a way that every channel is synchronized with channel 1.

7. Method for synchronization of RZ-WDM optical signals according to claim 4 in a way that the adjacent channels are synchronized.